

CLAIMS

- 1 1. A method for transferring data and telephone calls, comprising:
2 receiving a transfer request having a destination and data from an
3 application associated with a telephone call;
4 establishing a communications link with the destination;
5 transferring the data to the destination using the communications link;
6 and
7 requesting that the telephone call associated with the application be
8 transferred to the destination.
- 1 2. The method of claim 1 wherein the transfer request is received by
2 a flow object that includes routines for establishing the communications link with a flow
3 connection module at the destination.
- 1 3. The method of claim 1, further comprising:
2 receiving a call transfer notification from the destination; and
3 disconnecting the communications link with the destination after
4 receiving the call transfer notification.
- 1 4. The method of claim 1, further comprising:
2 obtaining an available destination address prior to establishing the
3 communications link with the destination.
- 1 5. The method of claim 1, further comprising:
2 transferring the telephone call to the destination after requesting that the
3 telephone call be transferred to the destination.

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1 6. The method of claim 5, further comprising:
2 notifying the destination of the telephone call transfer prior to transferring
3 the telephone call.

1 7. The method of claim 1 wherein receiving the transfer request
2 further comprises:
3 creating an instance of a flow connection object for the transfer request;
4 and
5 adding the data to the flow connection object.

1 8. The method of claim 1 wherein establishing the communications
2 link utilizes at least one computer-to-computer communication protocol.

1 9. The method of claim 8 wherein the at least one computer-to-
2 computer communication protocol is TCP/IP.

1 10. The method of claim 1 wherein the transferred data is received by
2 a flow connection module at the destination, the method further comprising:
3 transferring the data from the flow connection module to an application
4 associated with the destination.

1 11. The method of claim 1 wherein the request to transfer the
2 telephone call is sent in a format suitable for receipt by a computer-telephone interface
3 ("CTI") link to a private branch exchange ("PBX").

1 12. The method of claim 1, further comprising:
2 receiving client information from a database, wherein the client
3 information comprises the data in the transfer request.

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1 13. The method of claim 1 wherein the data in the transfer request
2 comprises an identifier for the telephone call.

1 14. The method of claim 1 wherein if the telephone call is
2 disconnected, a disconnect message is sent to the destination.

1 15. A method for automatically distributing calls in a call center
2 having agents, comprising:
3 receiving a telephone call into the call center and placing the telephone
4 call in a routing program having a first flow connection module;
5 determining an agent destination to receive the telephone call;
6 sending a transfer request to the first flow connection module, wherein
7 the transfer request comprises the agent destination and data;
8 establishing a communications link between the first flow connection
9 module and a second flow connection module at the agent destination;
10 transferring the data from the first flow connection module to the second
11 flow connection module; and
12 requesting a computer-telephone interface ("CTI") link to transfer the
13 telephone call from the routing program to the agent destination.

1 16. The method of claim 15 wherein the transfer request is received
2 by a flow object in the first flow connection module that includes routines for
3 establishing the communications link with the second flow connection module.

1 17. The method of claim 15, further comprising:
2 sending another transfer request to the second flow connection module,
3 comprising another agent destination and data;

9 requesting the CTI link to transfer the telephone call from the agent
10 destination to the another agent destination.

4 disconnecting the communications link with the third flow connection
5 module after receiving the call transfer notification from the third flow connection
6 module.

1 20. The method of claim 15, further comprising:
2 transferring the telephone call to the agent destination after sending the
3 transfer request.

1 22. The method of claim 15, further comprising:
2 receiving the transfer request by the first flow connection module;

1 23. The method of claim 15 wherein establishing the communications
2 link between the first flow connection module and the second flow connection module
3 utilizes at least one computer-to-computer communication protocol.

1 25. The method of claim 15, further comprising:
2 transferring the data from the second flow connection module to an
3 application associated with the agent destination.

1 27. The method of claim 15, further comprising:
2 receiving information associated with the telephone call from a database,
3 wherein the information comprises the data in the transfer request.

1 29. The method of claim 15 wherein if the telephone call is
2 disconnected, a disconnect message is sent to the first flow connection module.

1 30. The method of claim 15 wherein the agents are organized into at
2 least two sets of agents and wherein determining the agent destination to receive the call
3 further comprises:

4 querying an agent locator to identify a set of agents of the at least two
5 sets of agents appropriate to receive the telephone call;

6 identifying an agent in the identified set of agents to receive the telephone
7 call; and

8 locating an agent destination for the identified agent.

1 31. A system for transferring data and telephone calls having a
2 computer-telephony integration ("CTI") link, comprising:

3 a first flow connection module having a first flow object configured to
4 receive a transfer request having a destination and data from an application associated
5 with a telephone call, to establish a communications link with the destination, to transfer
6 the data to the destination, and to request the CTI link to transfer the telephone call to
7 the destination; and

8 a second flow connection module associated with the destination that
9 maintains the communications link with the first flow object.

1 32. The system of claim 31 wherein the second flow connection
2 module is configured to send the first flow object a call transfer notification that causes
3 the first flow object to disconnect the communications link.

1 33. The system of claim 31 wherein the first flow object is configured
2 to obtain an available destination address prior to establishing the communications link.

1 34. The system of claim 31 wherein the second connection module is
2 configured to receive a call transfer notice from the CTI link.

1 35. The system of claim 31 wherein the first connection module is
2 configured to instantiate the first flow object for the transfer request and to add the data
3 to the first flow object after receiving the transfer request.

1 36. The system of claim 31 wherein the first flow object and the
2 second connection module establish the communications link using at least one
3 computer-to-computer communication protocol.

1 37. The system of claim 36 wherein the at least one computer-to-
2 computer communication protocol is TCP/IP.

1 38. The system of claim 31 wherein the second flow connection
2 module is configured to transfer the data to an application associated with the
3 destination.

1 39. The system of claim 31, further comprising:
2 a database containing client information, including the data in the transfer
3 request.

1 40. The system of claim 31 wherein the data in the transfer request
2 comprises an identifier for the telephone call.

1 41. The system of claim 31 wherein if the telephone call is
2 disconnected, the first flow object is configured to send a disconnect message to the
3 second connection module.

1 42. A system for automatically distributing calls in a call center having
2 agents and a computer-telephone interface ("CTI") link, comprising:
3 a routing program configured to receive a telephone call upon entry of
4 the telephone call into the call center;
5 a locator configured to identify an agent destination to receive the
6 telephone call;
7 a first flow connection module having a first flow object configured to
8 receive a transfer request, having a destination and data, for the telephone call from the
9 routing program, to establish a communications link with the destination, to transfer the
10 data to the destination, and to request the CTI link to transfer the telephone call to the
11 destination; and
12 a second flow connection module associated with the destination that
13 maintains the communications link with the first flow object.

1 43. The system of claim 42 wherein the second flow connection
2 module further comprises a second flow object configured to receive another transfer
3 request, comprising another agent destination and data, the system further comprising:
4 a third flow connection module associated with the another agent
5 destination that is configured to establish a communications link with the second flow
6 object and receive the data transferred from the second flow object, wherein the second
7 flow is configured to object requests the CTI link to transfer the telephone call from the
8 agent destination to the another agent destination.

1 44. The system of claim 42 wherein the second flow connection
2 module is configured to send a call transfer notification to the first flow object that
3 causes the first flow object to disconnect the communications link with the second flow
4 connection module.

1 45. The system of claim 42 wherein the routing program obtains an
2 available address for the agent destination by using the locator prior to sending the
3 transfer request to the first flow object.

1 46. The system of claim 42 wherein the second connection module is
2 configured to receive notification from the CTI link of the telephone call transfer to the
3 agent destination prior to transferring the telephone call to the agent destination.

1 47. The system of claim 42 wherein the first connection module is
2 configured to instantiate the first flow object for the transfer request after receiving the
3 transfer request and to add the data to the first flow object.

1 48. The system of claim 42 wherein the first flow object and the
2 second flow connection module establish the communications link using at least one
3 computer-to-computer communication protocol.

1 49. The system of claim 48 wherein the at least one computer-to-
2 computer communication protocol is TCP/IP.

1 50. The system of claim 42 wherein the second flow connection
2 module is configured to transfer the data to an application associated with the agent
3 destination.

1 51. The system of claim 42 wherein the first flow object is configured
2 to format the request to transfer the telephone call sent through the CTI link for a CTI
3 middleware application.

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1 52. The system of claim 42, further comprising:
2 a database containing caller information data, wherein the routing
3 program is configured to retrieve the call information data and use the caller information
4 data as the data in the transfer request.

1 53. The system of claim 42 wherein the data in the transfer request
2 comprises an identifier for the telephone call.

1 54. The system of claim 42 wherein if the telephone call is
2 disconnected, the first flow object is configured to send a disconnect message to the
3 second connection module.

1 55. The system of claim 42 wherein the agents are organized into at
2 least two sets of agents and wherein the locator is configured to identify the agent
3 destination to receive the call by querying an agent directory to identify a set of agents of
4 the at least two sets of agents appropriate for the telephone call, and to identify an agent
5 in the identified set of agents to receive the telephone call, and locating an agent
6 destination for the agent.

1 56. A call center agent workstation, comprising:
2 a telephone configured to receive calls;
3 a call-handling application configured to process data associated with a
4 call on the telephone; and
5 a flow connection module configured to receive a transfer request from
6 the call-handling application to transfer the call and the data to a destination.

1 57. The call center agent workstation of claim 56, further comprising
2 a flow object in the flow connection module, wherein the flow object is configured to

3 receive the transfer request and is configured to establish a communications link with
4 another flow connection module at the destination.

1 58. The call center agent workstation of claim 56 wherein the flow
2 connection module is configured to retrieve from a locator program a network address
3 for the destination.

1 59. The call center agent workstation of claim 56 for use with a
2 corresponding destination call center agent workstation having another flow connection
3 module, wherein the flow connection module establishes a communications link with the
4 another flow connection module.

1 60. The call center agent workstation of claim 59 wherein the another
2 flow connection module sends the flow connection module a call transfer notification
3 that causes the flow connection module to disconnect the communications link.

1 61. The call center agent workstation of claim 56 wherein the flow
2 connection module is configured to send a request to a computer-telephony interface
3 link to transfer the telephone call to the destination.

1 62. The call center agent workstation of claim 56 wherein the flow
2 connection module is configured to instantiate a flow connection object for the transfer
3 request and adds the data to the flow connection object after receiving the transfer
4 request.

1 63. The call center agent workstation of claim 56, further comprising
2 a database that provides the data to the call-handling application.

1 64. The call center agent workstation of claim 56 wherein the flow
2 connection module establishes a communications link with another flow connection

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